ROUTE 123 OVERPASS
George washington Memorial Parkway Route 123 (Leesburg Road)
McLean Vicinity
Fairfax County
Virginia

HAER No. VA-73

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
P.O. Box 37127
Washington, D. C. 20013-7127

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I. INTRODUCTION

Location:	George Washington Memorial Parkway milepost 3.68, 3.8 miles from Interstate 495; carries Virginia Route 123 (Leesburg Road) over GWMP, Fairfax County, Virginia.
FHwA Structure No.:	3300-004P.
Date of Construction:	1957-1959.
Type:	Prestressed concrete girder bridge.
Designer:	Bureau of Public Roads (BPR) with approval from the National Park Service (NPS). T.D. Harris, BPR District Bridge Engineer for construction.
Contractor:	Wiley N. Jackson Co., Roanoke, Virginia.
Present Owner:	National Capital Region, National Park Service.
Present Use:	Allows GWMP traffic to pass under Route 123.
Significance:	The Route 123 Overpass on the GWMP is reported to be the first prestressed concrete girder bridge built on the parkway and in the district.[1]
Project Information:	Documentation of the George Washington Memorial Parkway and Clara Barton Parkway was undertaken as a multi-year project by the Historic American Buildings Survey and the Historic American Engineering Record (HABS/HAER), a combined division of the National Park Service, Robert Kapsch, Chief. The project was sponsored by the Park Roads Program of the National Park Service, John Gingles, Deputy Chief, Engineering and Safety Services Division. The Project Supervisor was Sara Amy Leach, HABS Historian. Bridge reports were prepared by Elizabeth M. Nolin (1988); Michael P. Kucher (University of Delaware, 1993); and Jennifer P. Wentzien (University of Washington, 1994). HABS Report No. VA-69 prepared by Timothy Davis (University of Texas) provides an overview history of the entire parkway project. Jack E. Boucher and Jet Lowe produced the large-format photographs. The Washington-based summer 1994 documentation team was headed by landscape architect Tim Mackey (Harvard University, Graduate School of Design).

[1] D. Hugh Brown, "Final Construction Report, Project 1A11", 1959, p. 6.

II. HISTORY

The Route 123 Overpass is one of several structures designed and built during the 1950s to carry connecting roads over the George Washington Memorial Parkway (GWMP)in norther Virginia. The project required the demolition of buildings and the relocation of various utility lines.

Although American engineers had been experimenting with prestressing technology since the turn of the century, the project was the first prestressed concrete bridge on the GWMP. American engineering journals actively discussed the technology beginning in the 1930s. However, it was not until the late 1950s when steel prices rose and the overall cost of construction went up, that prestressed construction boomed. Prestressing can reduce the weight of a concrete beam by nearly one half the that of the corresponding standard reinforced concrete beam.[2] The 1957 edition of the Standard Specifications for Highway Bridges by the American Association of State Highway Officials (AASHO) comments that the rapid development of prestressed research and practice had deferred the development of a code. AASHO recommended the 1954 BPR research paper, "Criteria for Prestressed Concrete Bridges."[3]

Description

The Route 123 Overpass is a prestressed concrete girder bridge resting on concrete piers and abutments. The center span is 110' with 26'-5" spans on each end. The structure is actually composed of twin spans with an 11' open median and resting on twin piers and abutments continuous across the median. Each side is 36' wide with a 6' sidewalk and 2'-6" sidewalk on the inside adjoining an 11' open median. The deck is on a slight skew with abutments and piers parallel to the parkway. Final costs were reported as $347,000 for construction and $26,004 for engineering.[4]

The center span was poured in place and post-tensioned under the supervision of the Freyssinet Company of New York. Prestressed short beams for the end span are by Crider and Shockey, Inc. of Winchester, Virginia. The Bureau of Public Roads Laboratory designed the concrete mix for the prestressed members. Reinforcing bar was supplied by Bethlehem Steel. The original aluminum railings were supplied by the Montague Betts Company of Lynchburg, Virginia. Guardrails for the approaches are stone faced concrete. Piquardo Stone Company of Washington, D.C. was the masonry subcontractor. Stoneyhurst Quarries supplied the stone masonry. Granite for the copings on the guardwalls is from the North Carolina Granite Company of Mt. Airy, North Carolina.[5]

Alterations

Original aluminum handrails were replaced in 1972 under project # 1A35.
The bridge was reconstructed in 1985.

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[2]Carl Condit, American Building Art: The Twentieth Century, 1961, p. 188.

[3]American Association of State Highway Officials, Standard Specifications for Highway Bridges, 7th edition, 1957, p. xxiv.

[4]D. Hugh Brown, "Final Construction Report, Project 1A11," 1959.

[5]Ibid.

III. SOURCES

American Association of State Highway Officials. Standard Specifications for Highway Bridges. Washington D.C. 7th edition, 1957.

Condit, W. Carl. American Building Art: The Twentieth Century. Oxford University Press. New York. 1961.

U.S. Department of Commerce, Bureau of Public Roads. Plans for Proposed Project # 1A11, 1A35. Microfiche reductions of original construction drawings on file at National Capital Region Park Headquarters, National Park Service, Washington D.C.

U.S. Department of Commerce, Bureau of Public Roads, "George Washington Memorial Parkway, Bridge Under Leesburg Road, Virginia State Route 123, Fairfax County, Virginia, Project 1A11: Final Construction Report." Submitted by D. Hugh Brown, Resident Engineer, 14 October 1960, on deposit at FHWA, Sterling, Virginia. See also "Final Construction Report, Project 1A35," 1972 for alterations. Sturcture Inventory and Appraisal Sheets are available from the same office.

U.S. Department of the Interior, Historic American Buildings Survey (HABS), No. VA-69, "George Washington Memorial Parkway," 1994. Prints and Photographs Division, Library of Congress, Washington D.C.